REMARKS

OBJECTIONS (CLAIMS)

The Office has objected to claim 17 due to informalities. Claim 17 has been amended to correct the antecedent basis objection.

REJECTIONS (CLAIMS)

35 USC 102

The Office has rejected claims 13, 15-19, 44 and 45 under 35 USC 102(b) as being anticipated by Mitchell et al. US 5,766,987 ("Mitchell"). Claim 13 is an independent claim, while claims 15-19, 44 and 45 depend from claim 13.

Amended claim 13 requires "each of said semiconductor devices being separately mounted in a pattern within said formation cavity." Support for this amendment is provided in the published specification. (*See* U.S. Pub. No. 2005/0062140: Paragraph [0044]). Mitchell does not disclose this limitation; instead, Mitchell teaches that "[t]here is no particular need for precise placement of the microelectronic subassemblies relative to one another or relative to the covering layers." (Mitchell: col. 7, lines 50-52). Step 14 of FIG. 1 in the present application, discloses that the "semiconductor devices are arranged within the formation cavity and...the devices are precisely arranged in a predetermined pattern." (U.S. Pub. No. 2005/0062140: Paragraph [0044]). It is important for the semiconductor devices to be separately mounted in a particular pattern within the formation cavity because "the lateral space

between adjacent devices and the space between the upper and lower surfaces provides the desired coating thickness over the semiconductor devices." (Id). The method of claim 13 produces devices that have a substantially uniform layer of coating material, using a process that can be repeated to produce substantially similar devices. Thus, Mitchell does not disclose the method of claim 13.

Additionally, the method of claim 13 requires:

> removing said cured or treated coating material with said embedded semiconductor devices from said formation cavity by releasing said film and said upper and lower section from said coating material and said semiconductor devices leaving said coating material uncovered.

Mitchell also fails to teach this limitation. Instead, Mitchell discloses:

> [a]t the inception of the present encapsulation process, each dielectric layer 60 is supported above the front or contact bearing surface 62 of the microelectronic element by a plurality of spaced apart elastomeric elements 70...spaces 72 between the elastomeric elements and between the dielectric layer 60 and microelectronic element surface 62 are unfilled." (Mitchell: col. 6, line 65 - col. 7, line 10).

Each dielectric layer 60 has a plurality of terminals 64 that face upward, away from element surface 62. Liquid encapsulant is introduced to the system of Mitchell and "fills in all of the spaces between and within the microelectronic assemblies, including the spaces 72 between the elastomeric elements 70." (Id at col. 8, lines 61-63). After the encapsulant in Mitchell has cured, the encapsulant "merges with the elastomeric elements 70 (FIG. 4) of the microelectronic assemblies to form a composite compliant layer between the dielectric layer 60 and

the front or contact bearing surface 62." (Id at col. 9, lines 41-44). Upon the removal of the top fixture element 32 and bottom fixture element 10, the encapsulant of Mitchell results in a layer of material interposed between dielectric layer 60 and microelectronic element surface 62, with the cured encapsulant layer being covered by dielectric layer 60. In the present application, when the film and the upper and lower sections are released from the coating material and the semiconductor devices, the coating material is left uncovered. No layers remain that could interfere with the operation of the semiconductor device.

The method of claim 13 is particularly well-suited for use in the manufacture of light emitting semiconductor devices. Thus, the difference between claim 13 and Mitchell is significant for several reasons. For example, Mitchell discloses that the dielectric layer 60 covers the encapsulant; whereas the coating material of claim 13 covers the semiconductor devices and protects them from the ambient during operationg. In some embodiments the coating material may be specially selected to function as a beam shaping element or lens, for example. Thus, the encapsulant of Mitchell is not left uncovered as required by claim 13.

Because Mitchell does not disclose all the limitations of claim 13, claim 13 is not anticipated by Mitchell. Claim 13 is otherwise allowable.

Claims 15-19, 44 and 45 depend from allowable claim 13 and are also allowable.

For at least the reasons stated above, Applicant requests a withdrawal of the rejection of claims 13, 15-19, 44 and 45 under 35 USC 102.

35 USC 103

The Office has rejected claims 42 and 43 under 35 USC 103(a) as being unpatentable over Mitchell in view of Soules et al. US 6,252,254 ("Soules").

Claims 42 and 43 depend from independent claim 13 and are also allowable.

For at least the reasons stated above, Applicant requests a withdrawal of the rejection of claims 42 and 43 under 35 USC 103.

CONCLUSION

Applicant submits that claims 13, 15-19, and 42-45 are allowable and requests that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

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